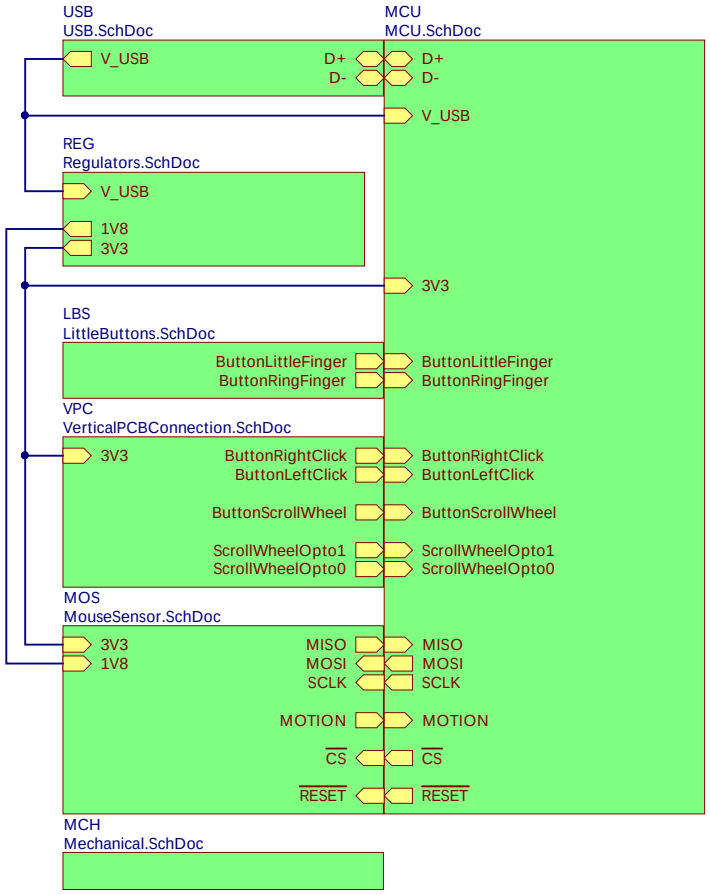
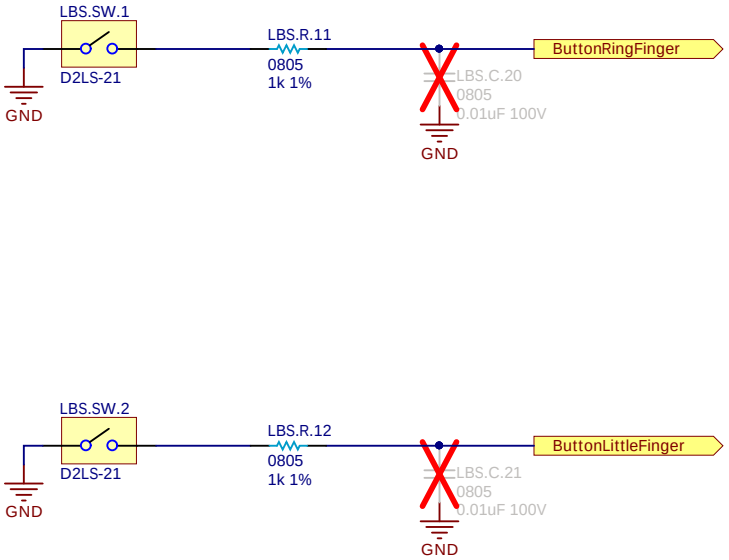


Title: Base.SchDoc			Ploopy Corporation 137-1140 Burnhamthorpe Road W Mississauga ON L5C 0A3 Canada
PCB: Base.PrjPCB		Version: R1.004	
Date: 10/22/2019	Time: 4:50:05 PM	Sheet 1 of 8	



These two switches actuate the buttons for the ring and little fingers. They're located on the base board, unlike the switches for the rest of the controls.

1k resistors provide some ESD protection, limiting injection currents.

Since the pull-up resistors are about 40k on the GPIO, the caps on this circuit limit the rise time to about 1 millisecond, which should help with debouncing if populated.

Title: LittleButtons.SchDoc		
PCB: Base.PrjPCB	Version: R1.004	
Date: 10/22/2019 Time: 4:50:05 PM	Sheet 2 of 8	

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Pick and Place Fiducials

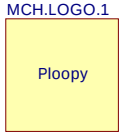
MCH.FID.1

IPC-7351 Fiducial 1mm

MCH.FID.2

IPC-7351 Fiducial 1mm

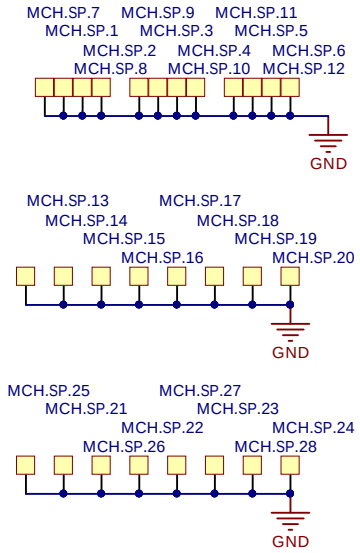
MCH.LOGO.1



Ploopy logo, silkscreen

Spark Gaps -- Case

Since the case has gaps in it, we expect ESD to worm its way in via creepage and perhaps other ways. To protect the board from this eventuality, we place spark gaps along the edges.



Title: Mechanical.SchDoc		
PCB: Base.PrjPCB		Version: R1.004
Date: 10/22/2019 Time: 4:50:05 PM		Sheet 3 of 8

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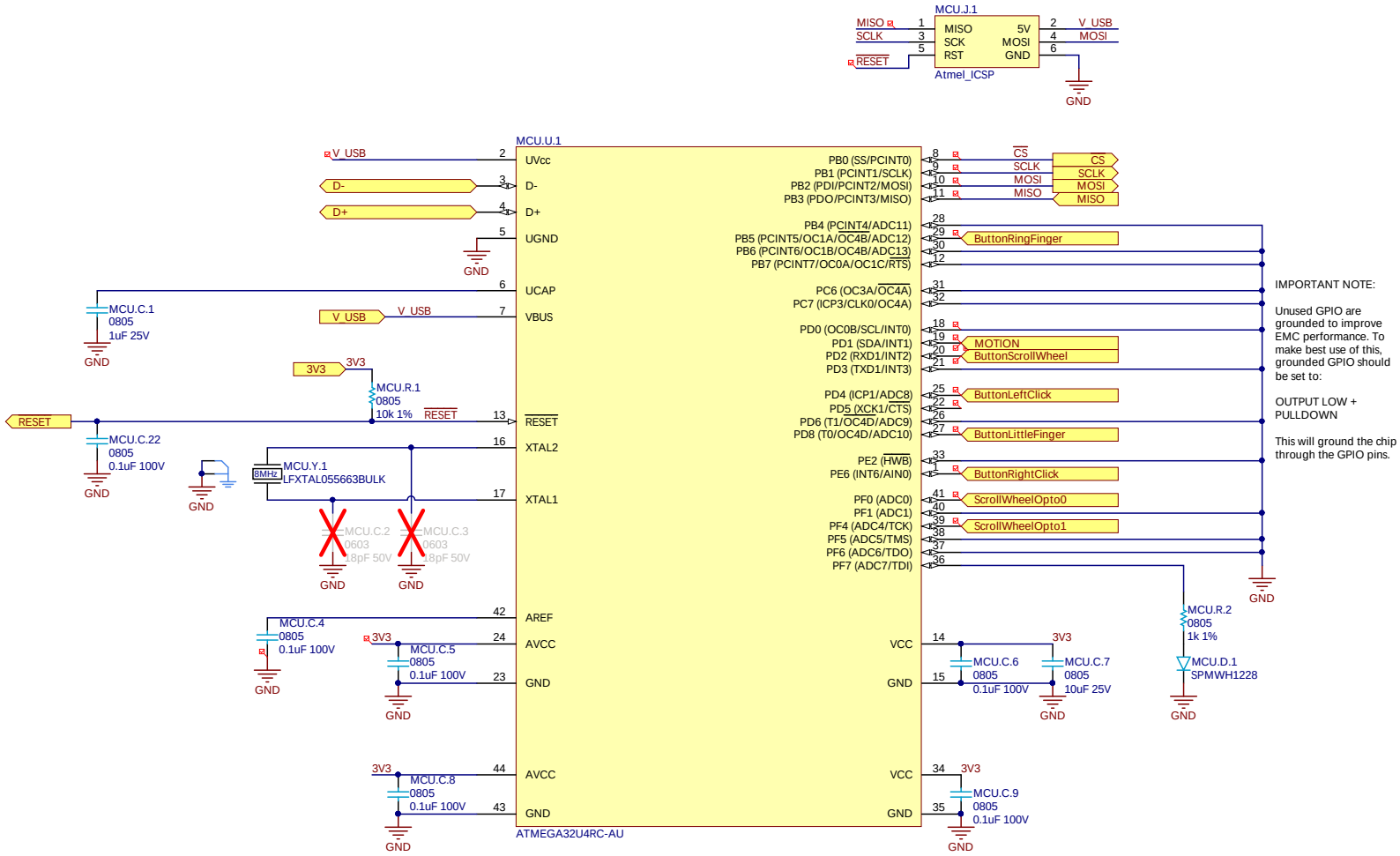

Title:	MCU.SchDoc
PCB:	Base.PrjPCB
Version:	R1.004
Date:	10/22/2019
Time:	4:50:05 PM
Sheet	4 of 8

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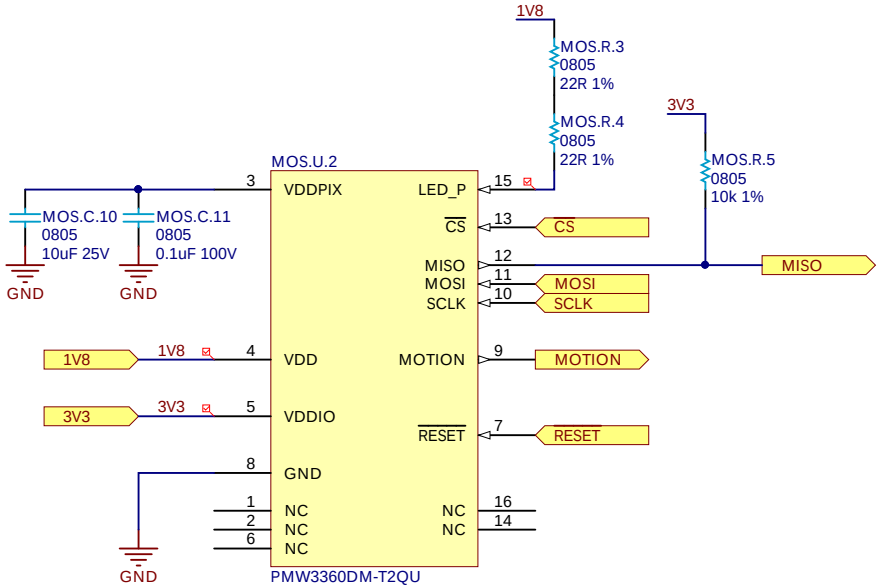

Title:	MouseSensor.SchDoc		
PCB:	Base.PrjPCB	Version:	R1.004
Date:	10/22/2019 Time: 4:50:05 PM	Sheet	5 of 8

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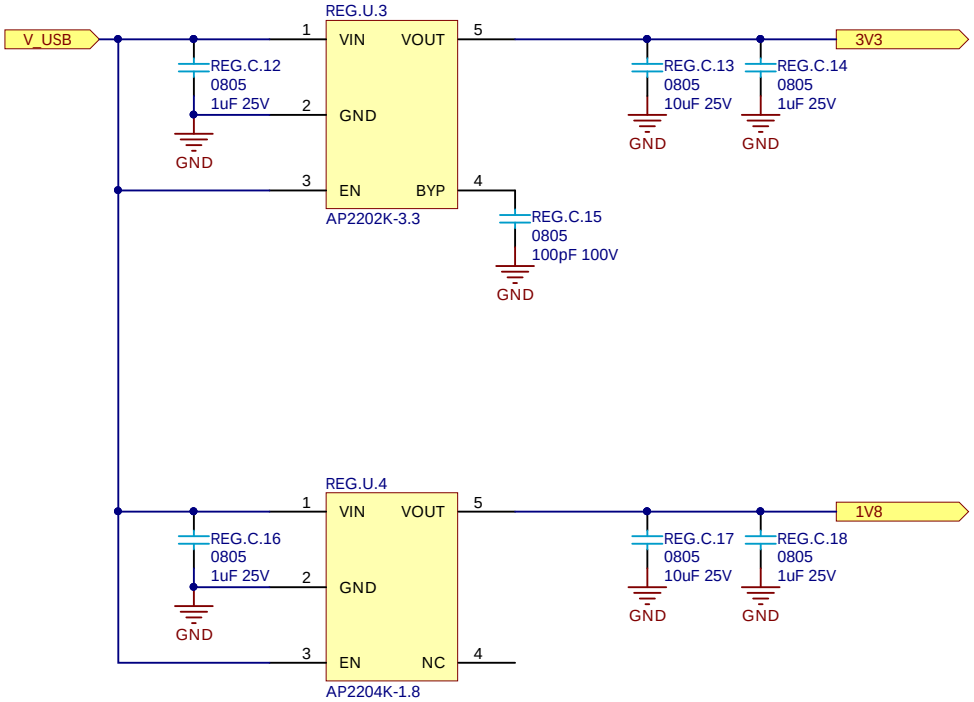

Title: Regulators.SchDoc		
PCB: Base.PrjPCB	Version: R1.004	
Date: 10/22/2019 Time: 4:50:05 PM	Sheet 6 of 8	

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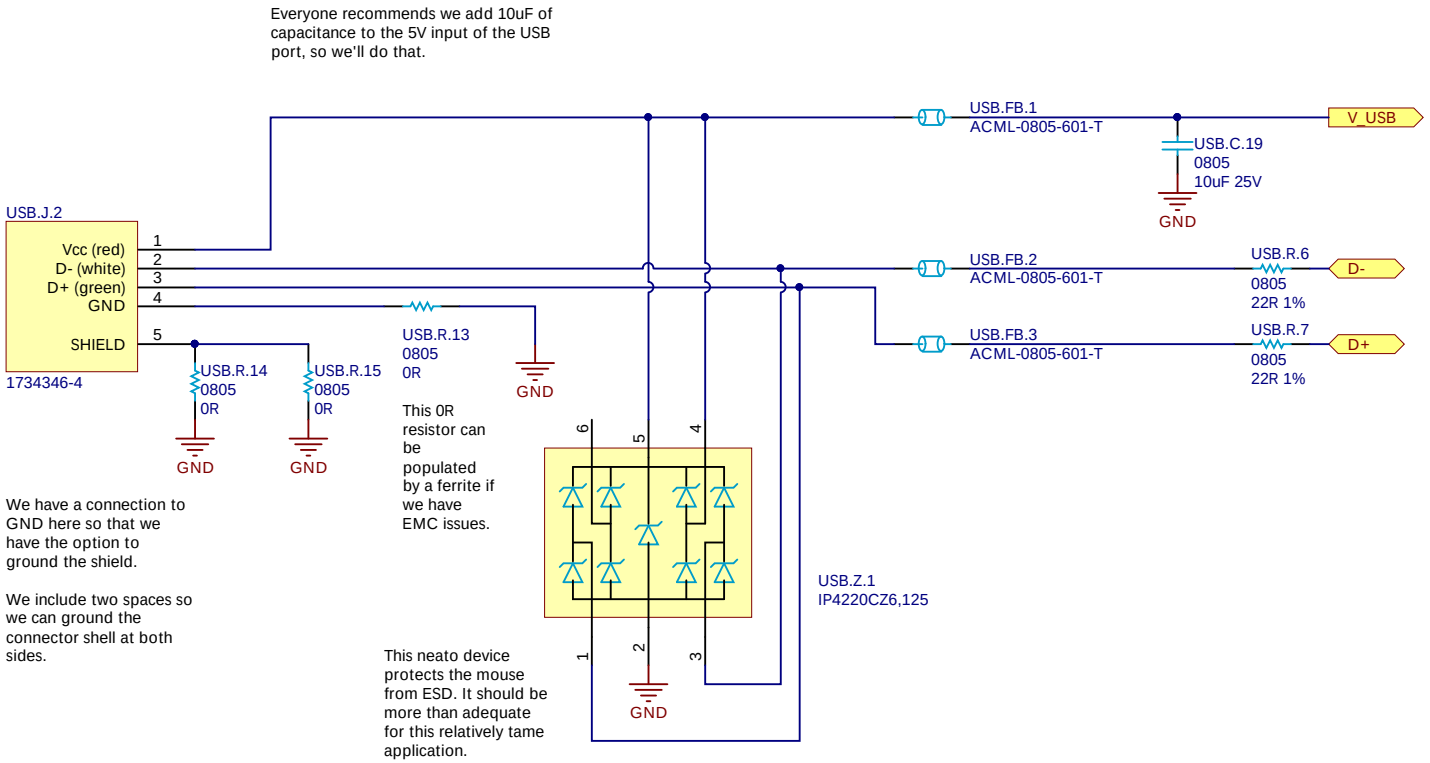

Title:	USB.SchDoc		
PCB:	Base.PrjPCB	Version:	R1.004
Date:	10/22/2019 Time: 4:50:05 PM	Sheet	7 of 8

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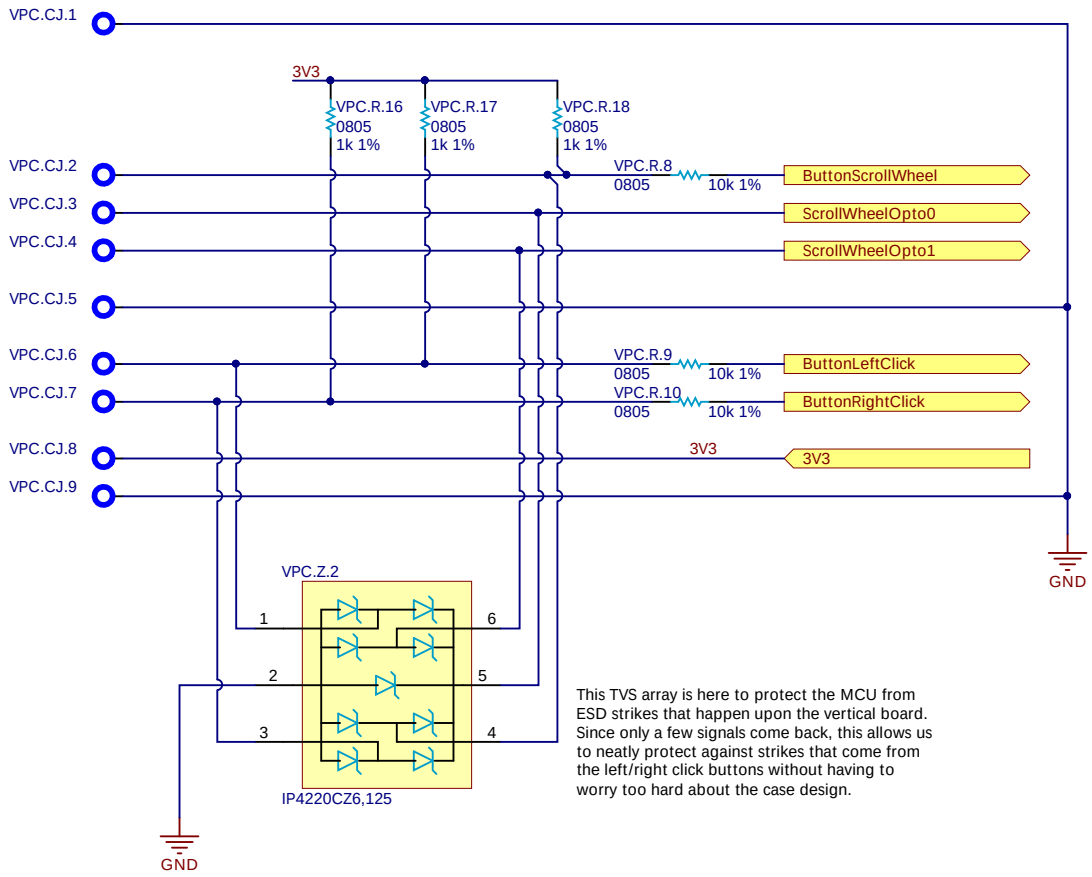
The two PCBs have castellated connections, which are represented here. These carry a shared ground and all the signals from the various UI bits and pieces that are hosted on the vertical board.

The inline resistors on the switch lines provide a modicum of ESD protection, limiting injected currents. Since the case should provide some decent protection against static discharge, we settle for a pretty basic solution.



This TVS array is here to protect the MCU from ESD strikes that happen upon the vertical board. Since only a few signals come back, this allows us to neatly protect against strikes that come from the left/right click buttons without having to worry too hard about the case design.

Title: VerticalPCBConnection.SchDoc			
PCB: Base.PrjPCB		Version: R1.004	
Date: 10/22/2019	Time: 4:50:05 PM	Sheet 8 of 8	

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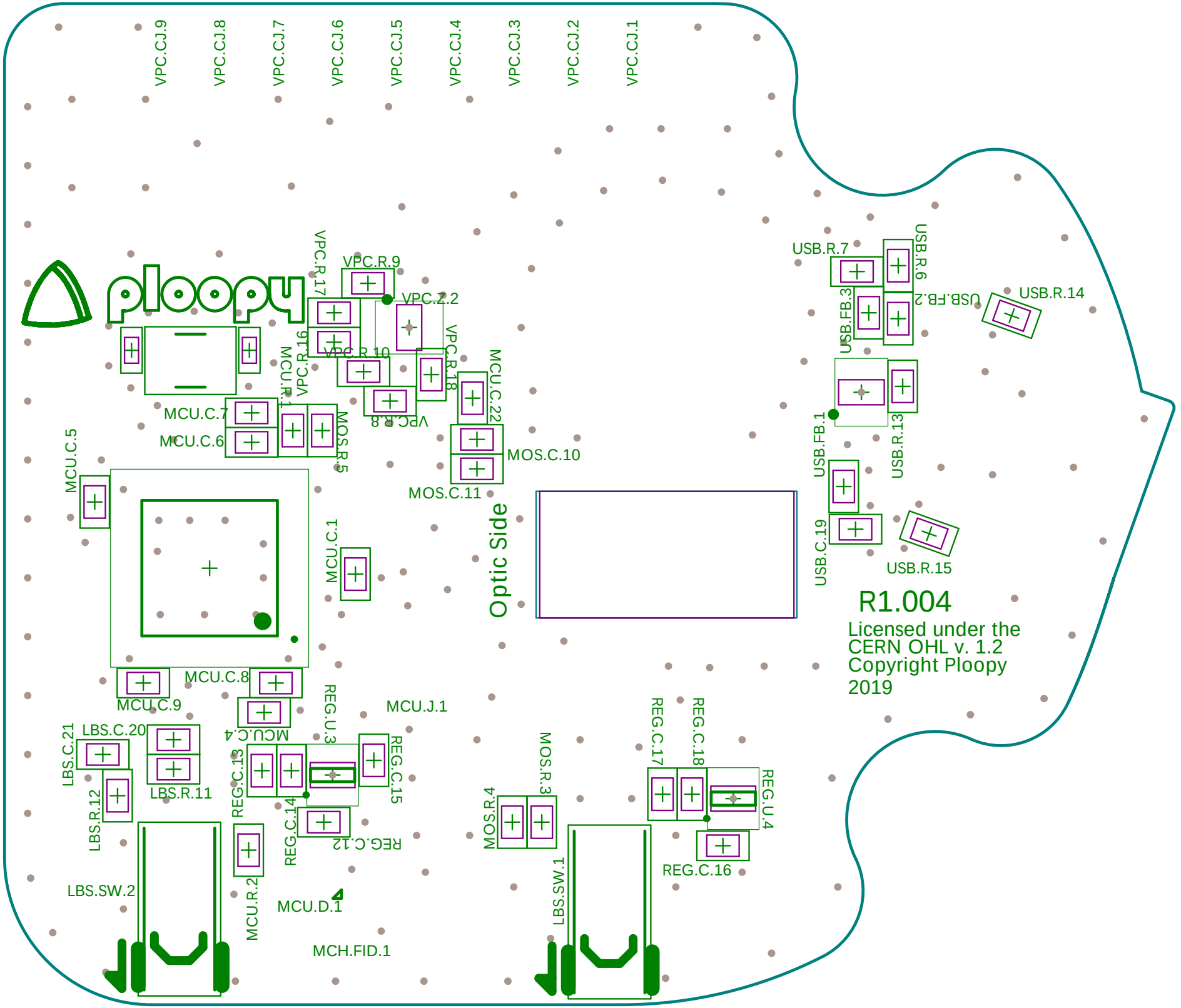
VPC.CJ.9
VPC.CJ.8
VPC.CJ.7
VPC.CJ.6
VPC.CJ.5
VPC.CJ.4
VPC.CJ.3
VPC.CJ.2
VPC.CJ.1
ploopy
VPC.R.17
VPC.R.9
VPC.Z.2
VPC.R.10
VPC.R.16
VPC.R.18
VPC.R.8
MCU.R.1
MCU.C.22
MCU.C.7
MCU.C.6
MOS.R.5
MOS.C.10
MOS.C.11
MCU.C.5
MCU.C.1
Optic Side
USB.R.7
USB.R.6
USB.FB.3
USB.FB.2
USB.R.14
USB.FB.1
USB.R.13
USB.C.19
USB.R.15
R1.004
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MCU.C.8
MCU.C.9
MCU.J.1
REG.U.3
MCU.C.4
LBS.C.21
LBS.C.20
LBS.R.11
LBS.R.12
REG.C.13
REG.C.14
REG.C.15
REG.C.12
MOS.R.4
MOS.R.3
REG.C.17
REG.C.18
REG.U.4
REG.C.16
LBS.SW.2
LBS.SW.1
MCU.R.2
MCU.D.1
MCH.FID.1